

Minimizing Computational Complexity in Cell-level Noise Characterization

Abstract

Reducing the number of computations required to pre-characterize cells in a cell-library. In an embodiment, a worst case vector which propagates most noise on an arc (combination of input pin and output pin) of a cell is determined, and NP characteristics and NIC are generated only for the worst case vector. Noise analysis is then performed using such curves generated from the worst case vector. Since curves corresponding to only the worst case vector may need to be generated, the computational requirements may be reduced. The search ranges in determining the immunity transition points forming the NIC may be reduced, according to some aspects of the present invention. The data corresponding to NIC may be used to generate NP curves, and vice versa to reduce computational requirements further.